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ABSTRACT

The most significant factors affecting the labor market during the 1980s were the United States' loss of competitiveness in the world marketplace, continued shifts in production from goods to services, changes in the skill requirements of many jobs, and demographic shifts in the population. During the next decade, incompatibility between the type of work available and the kind of labor force available to do it is expected because (1) the most rapid growth will be in occupations that require some postsecondary education and training, but the work force is not expected to have the educational background to qualify for the required training and education; (2) minorities and women, who continue to enter the labor force in large numbers, are underrepresented in the fast-growing occupations and overrepresented in occupations for which the slowest growth is projected; and (3) projected job decline will displace some goods-producing workers who are not expected to have the training for other available jobs and, unless men infiltrate the "pink collar ghetto," there may be serious worker shortages in health occupations. Strategies for vocational and career educators include playing a larger role in dropout prevention; developing articulation models between secondary and postsecondary education; emphasizing the importance of all students considering nontraditional occupational choices; developing programs that are accessible to all groups within the population; and providing programs that include the development of basic skills as well as those that are occupationally specific. (CML)

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JOBS IN THE FUTURE

Information about future labor market needs is important to a variety of audiences, including vocational and career educators who use it as the basis for curriculum development and in helping individuals make career decisions. During the 1980s, a number of factors converged to affect the labor market. The most significant of these were the nation's loss of competitiveness in the world marketplace, continued shifts in production from goods to services, changes in the skill requirements of many jobs, and demographic shifts in the population. Changes in projected labor market needs in combination with the changing composition of the work force are providing new challenges for vocational and career educators. This *ERIC Digest*, an update of Naylor (1985), provides information about jobs in the future including projections of future labor market needs, the educational implications of these projections, and the relationship between projected labor market needs and the changing work force. It concludes with some implications for vocational and career educators.

Future Labor Market Needs

Recent information from the Bureau of Labor Statistics (BLS) (Kutscher 1989; Silvestri and Lukasiewicz 1989) indicates that many of the trends related to future labor market needs begun in the 1980s will continue to the end of the century. BLS projections include the following:

- The rapid growth of the service-producing sector and the decline in the share of employment devoted to the goods-producing industry will continue. For example, of the 18 million increase in jobs projected between 1988 and 2000, 16.6 million are expected to be in the services industries.
- Of the 20 occupations with the fastest projected growth rate, half are in the health occupations, with rapid growth also projected for occupations related to computer technology.
- Occupations that will have the largest numerical increase will include those in retail trade, health services, and educational services.
- An increase in the number of construction jobs will not offset a decline in manufacturing jobs so that there will be a continuing decline in the total share of employment in the goods-producing sector.

Educational Implications of the Changing Labor Market

According to BLS (ibid.), there are a number of education-related implications associated with these labor market projections. These implications, which also continue to reflect trends noted in the 1980s, include the following projections:

- Each of the three major occupational groups requiring the highest levels of educational attainment is projected to continue to grow more rapidly than the average for total employment through the end of the century. These groups are executive, administrative, and managerial occupations; professional specialty occupations; and technicians and related support occupations.
- Those occupational groups with the fewest educational requirements, for example, operators, fabricators, and laborers, will experience either slower growth or a decline.
- Despite the general rising trend in educational requirements associated with employment, there will still be many good jobs available in 2000 for individuals without a bachelor's degree. Examples of these include brick layers, stonemasons, electricians, plumbers, metal-workers, data processing repairers, electronic repairers, and mobile heavy equipment mechanics. Some of these jobs will require only a high school education, but most will require some postsecondary education and training.
- Although jobs will be available for those without a high school education, entry into the better paying jobs will continue to be severely limited for such workers.

According to Silvestri and Lukasiewicz (1989), "the future occupational structure is projected to provide jobs for workers at all educational levels, but persons with the most education and training will enjoy the best opportunities" (p. 42).

Labor Market Needs and the Changing Work Force

The jobs of the future are evolving gradually, following many of the patterns established during the past decade. Although a lot is written about new jobs and job titles, most workers will be doing the same jobs during the next decade. It is likely, however, that most jobs will have new aspects and require expanded skills.

On the other hand, the character of the labor force is changing at a much faster rate (Levitan 1988). Major changes in the work force of the future enumerated by Johnston and Packer (1987) include a shrinking pool of younger people available to enter the work force due to declining population growth and more women, minorities, and immigrants entering the work force. Some incompatibility exists between the jobs of the future and the changes projected to occur in the work force (Lightle [1989]). This incompatibility between the type of work available and the kind of labor force available to do it gives rise to several issues.

The first of these has been termed the "educational shortfall" and is related to the expectation that the most rapid job growth will be in occupations that require some postsecondary training and education. There may be an insufficient supply of individuals with the necessary education and training to fill these jobs. Furthermore, there may be a lack of persons with the educational background needed to qualify for the required postsecondary training (Kutscher 1989).

A second set of issues, related to the first, has to do with the growing number of minorities in the work force.

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Minorities are currently underrepresented in the occupations projected to be growing the most rapidly and overrepresented in occupations that are projected to grow slowly or decline. There is additional cause for concern because the faster growing occupations require more education, and blacks and Hispanics have lower high school completion rates. Thus, they may not be qualified to enter post-secondary training. A continuing high unemployment rate for blacks and Hispanics and overrepresentation in declining occupations illustrates the poor use of these population groups in the labor force, which could have serious consequences in the future (ibid.).

The large number of women entering the labor force raises issues similar to those discussed for minority entrants. The creation of large numbers of jobs in the service sector will reinforce the low-wage, sex-segregated "pink collar ghetto" in which the majority of women work. Also, like minorities, women are underrepresented in those occupations projected to grow rapidly in the future and they are disproportionately enrolled in education and training that prepares them for low-wage jobs in traditional female occupations (Watson 1989).

A fourth set of issues is related to the area of job growth and decline. For example, rapid growth is projected within the health services, an area that includes occupations in which women have predominated. According to Kutscher (1989), "the issue that this projected growth raises is, can this job growth be achieved without a large increase in the number of men in some of these occupations, for example, nursing?" (p. 73). Declines in the goods-producing sector will likely lead to job displacement for some workers, many of whom may not have the training and education needed for the available jobs. Fluctuations in job growth and decline need to be addressed through training and education programs that will ensure workers are prepared for the types of jobs that are in demand.

Implications

The issues related to the interface of the projected labor market with the work force of the future are interconnected. Because the education and training requirements of future jobs are increasing, there is concern that many who will be entering the labor force will not be prepared. Vocational and career educators need to think of these issues as interrelated, rather than separate, problems (ibid.). Strategies that they can use to address these issues as interrelated problems include the following:

- **Advocating that their programs play a larger role in dropout prevention.** A career-focused curriculum has been proposed as one effective strategy for making instructional programs relevant to at-risk students and thus motivating them to remain in school.
- **Encouraging the further development of articulation models between secondary and postsecondary institutions.** Articulation between secondary and postsecondary institutions provides individuals a bridge into the type of technical education needed for the workplace of the future.
- **Emphasizing the importance of all students considering nontraditional occupational choices.** The changing composition of the work force in combination with changes in jobs means that vocational and career educators must continue their efforts to eliminate sex bias and stereotyping related to occupational decision making.
- **Continuing the development of programs that are accessible to all groups within the population.** Programs must accommodate a diversity of learners, including women, Hispanics, blacks, handicapped persons, limited-English-proficient individuals, and older adults.
- **Providing programs that include the development of basic skills as well as those that are occupationally specific.** Basic skills deficiencies can hinder job performance and limit an individual's ability to profit from further training.

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